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| 10/782,971 | 02/23/2004 | Mineyoshi Masuda | NITT.0195 | 7715 |
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| Stanley P. Fisher Reed Smith LLP Suite 1400 3110 Fairview Park Drive Falls Church, VA 22042-4503 | | | EXAMINER PHAN, TUANKHANH D | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/782,971

Applicant(s)

MASUDA ET AL.

Examiner

TUAN-KHANH PHAN

Art Unit

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

The amendment, filed on 1/30/2008, has been entered and acknowledged by the Examiner. Claims 1-23 are pending.

Response to Arguments

Applicant's arguments filed on 1/30/2008 have been fully considered but they are not persuasive.

Applicant argues that none of cited prior art references teaches or suggests such a step of "setting an allocation of requests transmissible out to a newly added server 900 at a value smaller than that set for each of the remaining servers in the server cluster by said one client, right after detecting an increase in the number of servers" as the present invention. In contrast, Chellis has a resource allocator 30 (rather than a "client") execute a reallocation request by a consumer 20 for migrating a number of users allocated to servers/rescores 25. The resource allocator 30 is set between users and servers (Figs. 1-2). Chellis does not have the client perform the necessary steps for allocating resources as the present invention. Therefore, Chellis fails to teach "setting an allocation of requests transmissible out to a newly added server 900 by said one client, right after detecting an increase in the number of servers" as the present invention. Furthermore, Chellis' resource allocator 30 deals with allocation requests without processing (col. 10, lines 3-9) by adjusting a number of issuing allocation requests as the present invention. Chellis simply does not "set an allocation of requests transmissible out to a newly added server 900 at a value smaller than that set for each

of the remaining servers in the server cluster" as the present invention. Gerszberg fails to compensate for Chellis' deficiencies.

Response. (1) Applicant discloses that the client transmits out a request, and hence changes the configuration. This clearly shows that the client, by itself does not change the configuration, but rather the receiving end is the one affectively changes the configuration. Equivalently, Chellis has a resource allocator, as admitted by applicant, receives requested that made by client and then effectively changes the configuration. The resource allocator, in addition, is the receiving-end, thus situating at the server side is inherent. (2) Setting an allocation of request transmissible out to a newly added server at a value smaller that that set for each of the remaining servers in the cluster by client. By the adjusting rule (col. 5, lines 1-17), disclosed by Chellis, it allows client to send a request accordingly with the comparison so that a greater or lesser number of resource can be allocated. (col. 11, lines 6-10). (3) Chellis set an allocation of requests transmitted to resource allocator of newly added server at a smaller number (col. 14, lines 24-27) right after the detection. Also a resource allocator can be incorporated with client side or server side to effectively utilize its functions locally, remotely, or centrally.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 7-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Chellis et al. (US Pat. 6,901,446), hereinafter Chellis.

Regarding claim 1, Chellis teaches a load distribution method adopted by a client-server system comprising a plurality of clients and a server cluster (abstract), said server cluster including a plurality of servers each used for processing requests made by said clients and allows a number of said servers to be changed dynamically, comprising: (i.e. **a new server may come online and dynamically allocating resource provided**, col. 5, lines 20-49):

detecting the number of servers composing said server cluster by one of the clients (i.e. **resource instance table for the availability of the new resources**, col.. 5, lines 25-30);

setting an allocation of requests transmissible out to a newly added server at a value small smaller than that set for each of the remaining servers in the server cluster by said one client, right after detecting an increase in the number of servers (i.e. **reallocation request to migrate a number of users from one or more servers to the new server is an obvious variation of the requests transmissible out to a newly added server**, col. 5, lines 40-46); and

transmits out requests to said servers on the basis of said set allocation (col. 5, lines 40-46).

Regarding claim 2, Chellis teaches a load distribution method according to claim 1, wherein each of said clients sets said allocation of requests transmissible out to said newly added server at a value increasing with the lapse of time (i.e. **resource value allocation is changing over a time period**, col. 7, lines 25-30).

Regarding claim 3, Chellis a load distribution method according to claim 1, wherein said detection of an increase in said number of said servers is used as a trigger

of each of said clients to set said allocation of requests transmissible out to said newly added server at a value small in comparison with that set for each of said other servers (e.g. **the excessive 45-client is smaller than the capacity 100 of the new server**; col. 5, lines 36-45; col. 8, lines 38-45).

Regarding claim 4, Chellis teaches a load distribution method according to claim 1, wherein each of said clients: acquires information on a performance of said newly added server; and sets said allocation of requests transmissible out to said newly added server on the basis of said acquired information (col. 11, lines 20-25; col. 19, lines 38-47).

Regarding claim 5, Chellis teaches a load distribution method according to claim 1, wherein each of said clients: acquires information on a state of said newly added server; and sets said allocation of requests transmissible out to said newly added server on the basis of said acquired information (i.e. **allocation status and the availability of a resource is based on the acquired state information**, col. 4, lines 15-23).

Regarding claim 7, Chellis teaches a load distribution method according to claim 1 wherein: said client-server system has a management server for managing the number of servers composing said server cluster (col. 10, lines 5-12); and a notice received from said management server as a notice of an increase in said number of said servers is used as a trigger of each of said clients to set said allocation of requests transmissible out to said newly added server at a value small in comparison with that set for each of said other servers (col. 10, lines 5-12).

Regarding claim 8, Chellis teaches a load distribution method according to claim 1 wherein: said client-server system has a management server for acquiring information

on a performance of each of said servers (col. 11, lines 20-25; col. 19, lines 38-47); and each of said clients:

acquires said information on a performance of each of said servers (col. 11, lines 20-25; col. 19, lines 38-47);

sets said allocation of requests transmissible out to said newly added server on the basis of said acquired information (col. 5, lines 40-46).

Regarding claim 9, Chellis teaches a load distribution method according to claim 1, wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (col. 21, lines 15-25).

Regarding claim 10, Chellis teaches a load distribution method according to claim 1, wherein each of said clients sets an allocation of requests transmissible out to each of said servers by changing quotas each set for every individual one of said servers (col. 3, lines 35-45) as an allotment of requests transmissible out to said individual server (col. 3, lines 43-49).

Regarding claim 11, Chellis teaches a load distribution method according to claim 10 wherein: said client-server system has storage apparatus connected to said servers (col. 13, lines 50-59); each of said servers holds directory information indicating storage locations of files stored in said storage apparatus (col. 13, lines 50-59); and each of said clients sets said allocation of requests transmissible out to each of said servers by changing quotas each provided for every individual one of said servers as an allotment of said directory information stored in said individual server where said allotment of said directory information storable in said individual server represents an

allotment of requests transmissible out to said individual server (i.e. resource tree, col. 13, lines 45-62).

Regarding claim 12, Chellis teaches a client-server system comprising a plurality of clients and a server cluster, said server cluster including plurality of servers each used for processing requests made by said clients and allows a number of said servers to be changed dynamically:

each of said clients comprising: a load-setting unit for setting an allocation of requests transmissible out to each of said servers (col. 4, lines 28-35);

a server-count detection unit for detecting the number of servers composing said server cluster (col. 5, lines 25-30); and

a load distribution unit for transmitting out requests to each of said servers on the basis of allocations set by said load-setting unit, (col. 5, lines 40-46); and

wherein right after the detection of an increase in said number of servers by said server-count detection unit, said load-setting unit sets an allocation of requests transmissible out to a newly added server at a value smaller than that set for each of the remaining servers in the server cluster (col. 5, lines 40-46).

Regarding claim 13, Chellis teaches a client-server system according to claim 12 wherein: each of said clients has an allotment-holding unit for holding an allotment set for every individual one of said servers (i.e. **allotment indication of 10 users per server is given as an example**, col. 5, lines 30-40) as an allotment of requests transmissible out to said individual server; and said load-setting unit sets an allocation of requests transmissible out to each of said servers by changing quotas each set for

every individual one of said servers as said allotment of requests transmissible out to said individual server (col. 5, lines 30-40).

Regarding claim 14, Chellis teaches a client-server system according to claim 13, said client-server system further comprising storage apparatus connected to said servers wherein: each of said servers is provided with a directory- information-holding unit for holding directory information indicating storage locations of files stored in said storage apparatus (col. 13, lines 50-59); said clients are provided with a management server for holding quotas each provided for every individual one of said servers as an allotment of said directory information storable in said individual server (col. 13, lines 50-59); and said load-setting unit sets said allocation of requests transmissible out to each of said servers by changing said quotas each provided for every individual one of said servers as an allotment of said directory information stored in said individual server (col. 5, lines 40-46).

Regarding claim 15, Chellis teaches a load distribution method according to claim 2 wherein: said client-server system has a management server for managing the number of servers composing said server cluster (col. 10, lines 5-12); and a notice received from said management server as a notice of an increase in said number of said servers is used as a trigger of each of said clients to set said allocation of requests transmissible out to said newly added server at a value small in comparison with that set for each of said other servers (col. 21, lines 15-25).

Regarding claim 16, Chellis teaches a load distribution method according to claim 2 (see the discussion of the claim 2 above), wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the

number of connections for communications with said servers (i.e. **indication of 10 connections per server is given as an example**, col. 5, lines 30-40).

Regarding claim 17, Chellis teaches a load distribution method according to claim 3, wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (i.e. **setting number of concurrent users could be read as the setting number of connections for communications – each user is a connection**, col. 3, lines 49-55; col. 5, lines 30-40).

Regarding claim 18, Chellis teaches a load distribution method according to claim 4, wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (col. 3, lines 49-55; col. 5, lines 30-40).

Regarding claim 19, Chellis teaches a load distribution method according to claim 5, wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (col. 3, lines 49-55; col. 5, lines 30-40).

Regarding claim 20, Chellis teaches a load distribution method according to claim 6, wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (col. 3, lines 49-55; col. 5, lines 30-40).

Regarding claim 21, Chellis teaches a load distribution method according to claim 7, wherein each of said clients sets said allocation of requests transmissible out to

said newly added server by setting the number of connections for communications with said servers (col. 3, lines 49-55; col. 5, lines 30-40).

Regarding claim 22, Chellis teaches a load distribution method according to claim 15, wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (col. 3, lines 49-55; col. 5, lines 30-40).

Regarding claim 23, Chellis teaches a load distribution method according to claim 8, wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (col. 3, lines 49-55; col. 5, lines 30-40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chellis as in view of Gerszberg et al. (US Pat. 6,385,693).

Regarding claim 6, Chellis teaches a load distribution method according to claim 5, wherein said information on a state of said newly added server but does not explicitly includes at least a cache hit rate, a cache utilization ratio or the number of requests each waiting for a processing turn. However, in the same field of load distribution added server, Gerszberg et al. disclose server includes cache hit rate to address

reallocation of server traffic and load distribution (col. 10, lines 43-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the cache hit rate and utilization taught by Gerszberg et al. into the server load distribution taught by Chellis to maintain uniform, fast and efficient network performance (Gerszberg et al., col. 10, lines 50-52).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **TUAN-KHANH PHAN** whose telephone number is (571) 270-3047. The examiner can normally be reached on 4/5/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TKP

/don wong/
Supervisory Patent Examiner, Art Unit 2163